

# REACH

A publication of the U.S. Department of Energy for all Hanford Site employees

## FINALLY HEADED

**SOUTH:** Keith Klein, manager of the Department of Energy Richland Operations Office, spoke with Waste Management Project employees last Wednesday afternoon as the first shipment of Hanford transuranic waste, seen in the background, was preparing to leave the site. Seven 55-gallon drums of waste were transported 1,800 miles to the Waste Isolation Pilot Plant near Carlsbad, N. M., where the waste will be permanently deposited 2,150 feet under the Chihuahuan Desert in a bedded-salt formation.



## DOE, Fluor Hanford and DynCorp aid fire victims

Michael Turner, FH

One of the first statements U.S. Department of Energy Secretary Bill Richardson made, after landing in the Tri-Cities to view the Hanford fire, was that he would “devote whatever means within his power to help with recovery.”

Richardson didn't mean just on the Hanford Site.

No sooner had the Hanford fire been announced as officially contained, than DOE Richland Operations Office Manager Keith Klein saw that the Secretary's pledge of

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## DOE, Fluor Hanford and DynCorp aid fire victims, cont.

off-site assistance was carried out. In one of his first post-fire actions, Klein officially authorized the use of Fluor Hanford resources to aid local residents affected by the fire.

Heavy equipment and personnel, provided by Fluor subcontractor DynCorp Tri-Cities Services, have since been put to use by the newly formed Benton City Recovery Committee.

"The committee is made up of officials from Benton City, Benton County, the Port of Benton, the Benton County Sheriff's Office, Benton County Fire District No. 2, the Benton County Emergency Center and the American Red Cross," said Abe Greenberg, fire recovery project manager for Fluor Hanford. "The committee has been assisted by DOE, Fluor Hanford and DynCorp representatives."

The main task of the committee, according to Benton County Commissioner Leo Bowman, is to "coordinate the demolition and removal of the fire debris off of the properties of those affected by the fire. This assistance is especially timely and helpful to the unfortunate residents left without insurance during the fire."

The assistance also helps in the interim period while the county assesses the amount of state or federal aid it might receive, Bowman said. Tom Savage, who is on-site coordinator for DynCorp Tri-Cities, said the help has been appreciated.

"You can't rebuild until you remove what's in the way," Savage said. "Plus, psychologically, it helps if you don't have to be reminded constantly of the damage the fire did. For some people, the recovery process doesn't start until their property is at least cleared. I think people are especially grateful that we're out here doing this."

Savage said that the cleanup effort mostly entails sifting through piles for valuables, then carting the remaining loads off for disposal.

Bud Evans, one of the homeowners affected by the fire, wanted to give thanks to the effort, especially to the DynCorp personnel who arrived on the scene as the ground still smoldered.

"I am especially grateful for the help that is being provided, particularly to those without insurance," said Evans, who is a senior health physicist with DynCorp Tri-Cities.

In a letter, Bowman thanked the DOE-RL manager for his deployment of Hanford resources. "Both Fluor Hanford and DynCorp Tri-Cities Services are working with the community in an excellent manner," Bowman wrote to Klein. "The assistance provided by Fluor Hanford and DynCorp under the DOE umbrella is a vital ingredient to some of the homeowners' ability to recover from such an adversity as the fire."

The cleanup effort is expected to continue through the week of July 17. ♦



Distribution questions:  
call the Mailroom, 375-5170

See the *Hanford Reach* on the Web at:  
[www.Hanford.gov/reach/index.html](http://www.Hanford.gov/reach/index.html)

**Keith Klein, Manager**  
DOE Richland Operations Office

**Dick French, Manager**  
DOE Office of River Protection

**DOE Richland Operations Office**

Guy Schein, A7-75, 376-0413, fax 376-1563

**DOE Office of River Protection**

Mig Owens, H6-60, 376-4751, fax 376-8532

**Fluor Hanford**

Editorial office: B3-30, 376-4639, fax 376-5704

Craig Kuhlman, manager of Communications

Dennis Cresswell, editor

Cornelia Brim, associate editor

**CH2M HILL Hanford Group**

Ace Etheridge, H7-07, 372-8058, fax 372-8036

**Bechtel Hanford, Inc.**

Sue Kuntz, H0-09, 375-4673, fax 372-9115

**Hanford Environmental Health Foundation**

Diane Turney, H1-53, 376-4101, fax 372-3139

**Pacific Northwest National Laboratory**

Katie Larson, K1-55, 375-3698, fax 375-2221

**Design:** Sally Green, Lockheed Martin Services, Inc.

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Hanford Reach, B3-30  
Fluor Hanford  
P.O. Box 1000,  
Richland, WA 99352  
Fax: 376-5704  
e-mail:  
[Hanford\\_Reach@rl.gov](mailto:Hanford_Reach@rl.gov)  
Phone: (509) 376-4639

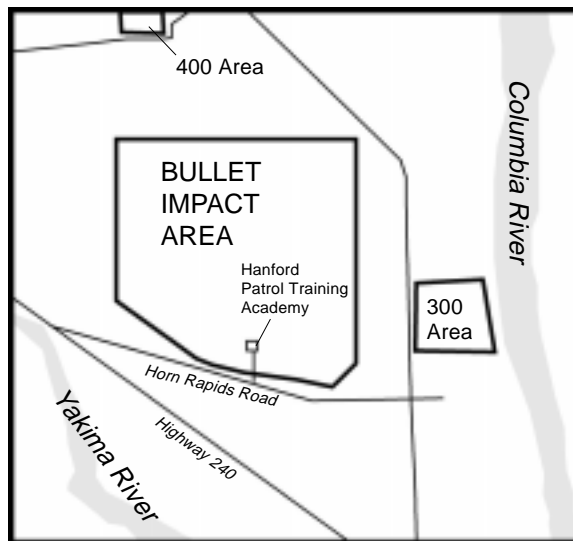
## Notify Patrol Academy before entering impact area

All employees and visitors to the Hanford Patrol Training Academy's bullet impact area are reminded to follow guidelines, procedures and restrictions. There is increased concern because Hanford fire recovery activities may bring people into the safety buffer zone that surrounds the training academy and extends east toward the 300 Area and north toward the 400 Area.

The bullet impact area is where rounds discharged at the training academy firing range may land. Individuals with business in the impact area are cautioned to enter only after receiving approval from the Patrol Training Academy, and to follow the sign-in/sign-out procedures so firing range activities can be closed down accordingly.

The boundaries of the impact area are identified with signs. Barricades control access, and access is for official use only.

Individuals needing to enter the bullet impact area should contact the Patrol Training Academy first by phoning 376-2351. During off-shift hours, please notify the Patrol Operations Center at 373-3800.



## 2000 Hanford fire most intense, not biggest

Michele Gerber, FH

The Hanford fire that scorched 192,000 acres last month wasn't as big as the 1984 "Rattlesnake Mountain Fire," but it was the most intense and fastest-moving fire in Hanford's history.

From Aug. 10 to Aug. 12, 1984, 200,000 acres both on and off the site were burned in a fire that expanded westward 20 miles during a 24-hour period. The June 2000 fire moved 20 miles southeastward in a 90-minute period on June 28 from a desert area near the junction of Routes 24 and 240. However, thanks to nearly superhuman efforts by firefighters, no lives were lost in either blaze and no nuclear structures burned.

To veteran Hanford Fire Chief Don Good, who led efforts to fight both fires, the two were very different. "The June 2000 fire was so intense and fast-moving that I don't think any human efforts could have stopped it on Wednesday the 28th," said Good. "We always fight as hard as we can, and we did that. The Hanford Fire Department is trained for fighting fires aggressively, and we do that with no holds barred no matter what the situation."

*Continued on page 4.*

### Accounts open to aid fire victims

Two donation accounts relating to the range fire have been set up.

An account has been opened at the Bank of America to help Fluor Federal Services employee Bob Pierce with medical and housing needs. Pierce was burned when fire destroyed his Benton City home. He is recovering at Harborview Medical Center in Seattle.

Checks made out to "Account for Bob Pierce" can be delivered to any Bank of America branch or can be mailed to Bank of America, Account for Bob Pierce, 1007 Knight Street, Richland, WA 99352.

Another account has been established at the U.S. Bank branch in Benton City to help people who lost homes or property in the fire. Donations will be handled through the Benton-Franklin chapter of the American Red Cross.

Checks should be made out to "Hanford Fire Relief Fund" and mailed to U.S. Bank, Hanford Fire Relief Fund, P.O. Box 368, Benton City, WA 99320.

### Further east, north

The 1984 fire started from a lightning strike on privately owned wild land northeast of Sunnyside. The area is west of Rattlesnake Mountain and south of Snively Canyon. It started about 10 p.m. on a Friday.

HFD could not respond to the initial sighting because the fire was not on the Hanford Site nor on property covered by any mutual fire aid agreements. So the department took a defensive posture along the road at the 1,200-foot level of the eastern slope of Rattlesnake Mountain.

The fire met them there in the early morning hours of Aug. 11 — burning out of control toward some botanical research buildings. The HFD successfully protected those buildings and pulled back to make a stand at Route 240.

Winds picked up to 35-45 miles per hour with higher gusts, and the fire jumped Route 240 at 1 p.m. Aug. 12. At that point, mutual aid agreements with other fire departments were activated, along with the Hanford Site Emergency Control Center (now known as the Emergency Operations Center).

The fire quickly spread east and north, covering nearly the entire area between 200 East and a stretch of desert midway between the 300 and 400 Areas. It progressed to the Columbia River between what was then the Washington Public Power Supply System area and the old Hanford townsite. HFD was successful in protecting the 400 Area and WPPSS.

As the winds slowed and shifted to the northeast on the night of Aug. 12, HFD made a decision to back-burn from Horn Rapids Road to the north, and that stopped the fire.

### The 2000 fire

Nearly classic conditions combined to produce the June 2000 Hanford fire. According to Chief Good, factors included a huge supply of fuel from a wet spring, high temperatures, low humidity, an unstable atmosphere and wind. Rough, inaccessible terrain also made the fire hard to fight in its earliest hours.

Good explained that the 2000 fire became very hot and threatening almost immediately. For the first two hours, direct means of fire suppression were used — mainly pouring water directly on the flames at close range. After about two hours, however, flames were over 10 feet high and required indirect methods such as cutting fire breaks and conducting burn-outs and back-burns.

The fire headed almost instantly toward difficult terrain. The Snively Canyon/Rattlesnake Mountain area has deep, narrow canyons that plunge straight down from high ridges. Because the terrain varies from about 3,600 feet of elevation down to a few hundred feet within just a few miles, it can even produce its own wind shifts, and the fire created its own wind as well. Burning chunks of sagebrush were being hurled up to half a mile ahead of the fire front on the first night.

*Continued on page 5*



## 2000 Hanford fire most intense, not biggest, cont.

In the 2000 fire, HFD was first on the scene and first in command. "We attacked the fire as aggressively and directly as we could, and we called for help," said Good. "Our tri-county mutual aid partners responded, the U.S. Fish and Wildlife Service responded and the state responded. We all worked together vigorously in attacking this intense fire, and there was excellent coordination.

"Considering the ferocity of the fire and the conditions firefighters and support crews were working under, the fact that there were no serious injuries demonstrated the dedication to safety and training that these individuals practiced," concluded Good. ♦

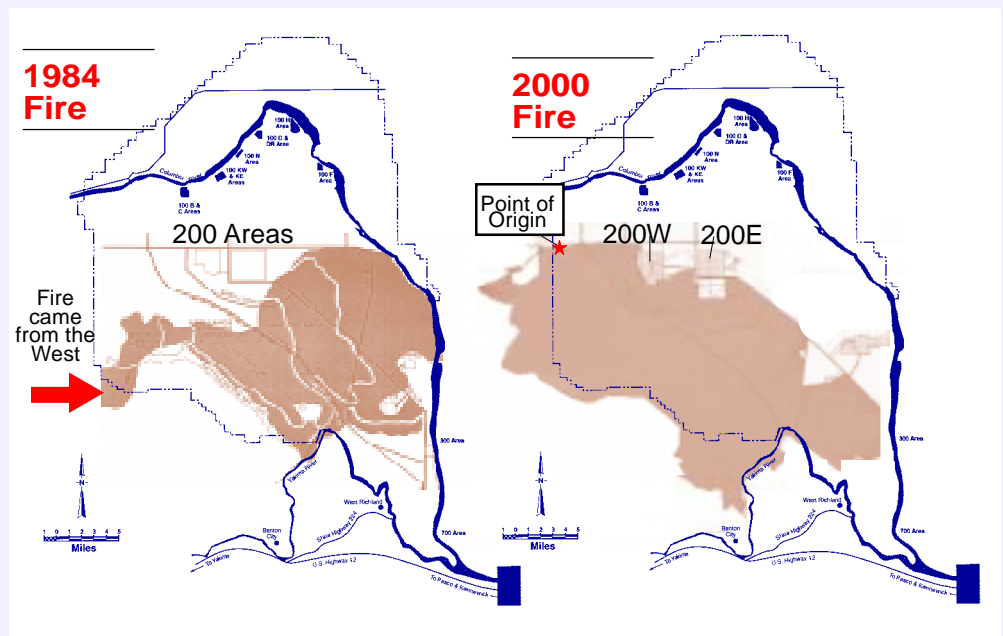
## Hanford's worst fires compared

### The 1984 fire

In battling the 1984 fire, two Forest Service air tankers made 14 drops of fire retardant (about 34,000 gallons in total) and 132 firefighters from 10 different departments joined the effort.

Thirty-six pieces of firefighting apparatus were used, as well as six pieces of heavy equipment such as bulldozers and road graders.

The fire front spanned eight to 10 miles at its widest, and two wooden structures on site burned. The total fire loss was placed at more than \$156,000.



### The 2000 fire

The June 2000 fire involved about 900 firefighters from a still undetermined number of fire departments. More than 200 pieces of firefighting apparatus were deployed along with dozens of bulldozers and other heavy equipment.

The worst area was about as wide as the 1984 fire, but this year's fire had multiple fronts moving in varied directions. It burned more than 70 structures, mostly off the site, and the fire loss has thus far been estimated at more than \$5 million. Some costs haven't yet been calculated.

Five air tankers and two large helicopters poured countless loads of retardant and water on this fire. ♦

# ERC creates an oasis in Hanford's 100B Area desert

Todd Nelson, BHI

Environmental Restoration Project contractor Bechtel Hanford, Inc. is transforming an old gravel pit at Hanford's 100B Area into a desert oasis.

The new wetland was constructed when soil and rock were removed from a "borrow pit" and used to replace contaminated material excavated for disposal. The transformation is providing valuable wetland habitat in the desert and could be a future public resource when cleanup is completed and the land is made available for other uses.

The environmental project is part of BHI's efforts for the Department of Energy to restore Hanford's Columbia River corridor. Workers in the early days of the Hanford project excavated a small portion of the pit below groundwater level.

"However, it was more of a wet spot than a wetland, so we decided to enlarge the area," said Alvin Langstaff, task leader for B, C and DR remediation projects in the 100 Area.

Since BHI would be removing soil and rock to replace excavated contaminated material transported to the Environmental Restoration Disposal Facility, it was decided to do the replacement in a planned fashion to create a larger wetland in the area.

"We were able to significantly enhance the appearance of the gravel pit and the size of the wetland at no additional cost," Langstaff said. "Chad Curtis of Mike M. Johnson, Inc. was the equipment operator working at the site. He used to excavate wetlands for the Corps of Engineers and took a lot of pride in making the area as natural in appearance as possible," added Langstaff.

The wetland area has a sculpted shoreline, a few islands and large boulders to provide shade for emerging wildlife. The average depth is 2 to 3 feet with some areas as deep as 6 feet. The original wetland was only a few hundred square feet in size, but did contain some green vegetation. The new wetland covers about 60,000 square feet or 1.5 acres.

After the pit was excavated, people from BHI's Natural Resources and Risk Assessment Group planted willow, cottonwood and locust trees along the shoreline. Cattails also have started to grow.

"It will take three to five years for the plants to establish themselves enough for this to look like water refuges we're used to seeing, but it has already provided needed habitat in the desert," said Ken Gano, senior scientist in BHI's Natural Resources Group.



April Johnson, left, of Bechtel Hanford's Natural Resources and Assessment Group helped plant willow and cottonwood trees in the expanded wetland at Hanford's B Area. Alvin Langstaff, BHI task leader, is responsible for excavations that created the new wetland area. Lush plants exist at the old small pond, but it will take two to three years for recently planted vegetation to establish itself.



The B Area wetland was created from an old "borrow pit" located about one-quarter mile from the Columbia River.

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"Although only about one-quarter mile from the river, this type of wetland habitat is a valuable commodity in the desert," said Gano. "This wetland is already providing habitat for spadefoot toad tadpoles and several species of birds. We've also seen evidence that it is being used by deer and other mammals, as well as insects."

Only a portion of the borrow pit was converted to wetland. However, the entire area eventually will be revegetated with native shrubs and grasses. "Our policy is that any areas we disturb are revegetated, including borrow pits," Gano said.

Nearly 700,000 tons of material have been hauled from the borrow site since 1999. Langstaff expects another 300,000 tons to be removed and used as backfill before the remediation of B Area is complete.

The wetland and adjacent B Reactor are only four miles from the Vernita Bridge. Langstaff and his crew planned the new wetland with the thought that it might someday be a resource for people as well as wetland creatures.

"When alternative uses for the river corridor are decided, this area will present some interesting options," said Langstaff. ♦

## Don't feed the animals!



Ah, those lazy days of summer! Eating outside, taking that lunchtime walk, feeding that hungry rabbit that comes around...

Wait! Back up a moment.

The fact is, that cute cottontail outside the plant can survive quite well without the leftover carrot from your lunch. "Make no mistake," said Ray Giddings of Hanford's Animal Control Operations. "Feeding wildlife is not a service to the wildlife. It makes them dependent on artificial foodstuffs and can reduce their chances of survival by unbalancing their diet."

Joel Millsap of Fluor Hanford's Radiological Technical Standards group also cautions that animals can, in some cases, spread radioactive contamination or expose people to diseases such as the hanta virus. He advises discarding garbage in approved containers and not leaving food where animals can get to it. If you discover animal feces, call 376-PEST to summon a pest-control expert.



Feeding wildlife around the workplace is not just a bad practice, according to Giddings. It also violates pest-control guidelines of the Occupational Safety and Health Administration. OSHA requires companies to maintain facilities in such a way that they "prevent the entrance or harborage of rodents, insects, and other vermin."

So, enjoy Hanford's unique wildlife as if you were at the zoo — observe the animals, but refrain from feeding them. ♦



# Hanford pistol team edged to third in DOE competition

Deborah Dunn, FH

The Hanford Patrol pistol team took third-place honors in the Department of Energy's annual Security Police Officer Training Competition.

The hosting Pantex Site pulled ahead for first place, taking home the Secretary's Trophy in the DOE team division. Oak Ridge and Hanford followed, running neck-and-neck with less than two points separating their final scores.

Pantex had an overall score of 370.09 points, Oak Ridge placed second with 328.21, and Hanford was third with 326.48. Other teams were from Idaho National Engineering and Environmental Laboratory, Los Alamos, Nevada Test Site, Rocky Flats, Sandia, Strategic Petroleum Reserve Operations and Savannah River.

"I am extremely pleased with the performance of our team," said Al Bowser, acting general manager for Protection Technology Hanford Safeguards and Security. "With limited time available to train, a last-minute substitution due to a family emergency, and without a 'home-court' advantage, team members performed extremely well."

Bowser was most impressed with the team award. "I believe it says a lot when you can take a number of highly competitive individuals and get each to put aside individual glory for the sake of the team. To place in the top three is a significant achievement. We are very proud of them," he said.

The Hanford Patrol team consisted of Ralph Bell, Micah Clark, Sam Hernandez, Robert Maier, Scott McGary and team captain Mike Peale.

"During the competition at Pantex, it was well recognized that Hanford had a very highly qualified shooting team," said captain Peale.

"Our weapons-handling skills were second to none," Peale said. "The sportsmanship, professionalism and overall conduct conveyed by Hanford Patrol members was noted by several Pantex officials as well as range officers from the Central Training Academy."

Pantex, located east of Amarillo, Texas, hosted the 28th annual competition, called "Top O' Texas Big Gun Challenge 2000." Competition included four team events, four individual events and a written test. The competition is designed to provide individual and team firearms and tactical training in a competitive environment.



Hanford Patrol pistol team members prepare for a prone to running dash to the shooting positions during this year's national competition outside Amarillo, Texas. Photo courtesy of Pantex SPOTC 2000.

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## Hanford pistol team edged to third in DOE competition, cont.

Competition is open to DOE and DOE contractor employees. Full-time accredited law enforcement officers and active duty military per Overall team standings are determined by points gained in four competitions. In these events, Hanford Patrol earned third place in team decision shooting, fourth in team fire and maneuver, sixth in team tactical assault, and second in the big gun team challenge or Super Team event.

Hanford team members reported that the Super Team event was by far the toughest of the competitions with the biggest tests.

"None of the teams shot better than Hanford Patrol but a couple of the younger teams ran a bit faster than us," said Patrol Chief Greg McDowell. "Still, we had an excellent showing, especially in the longest and toughest events."

The prestigious Security Police Office of the Year award is based upon individual performance in four skill competitions and the comprehensive written examination. Hanford Patrol's Sam Hernandez, the 1999 defending champion, took third-place honors this year, behind Chris Van Etten of Idaho National Engineering and Environmental Laboratory, who won the title, and Russ Baker of Pantex, who placed second.

Individual standings from a field of 50 included: Hernandez, who was second in individual tactical assault, fourth in individual alarm response and second in the DOE written test; Maier, fifth in individual alarm response; Bell, seventh in individual low light; and McGary, eighth in individual fire and maneuver.

The Hanford Patrol selects a team to represent the site through an annual internal competition. The local competition is designed to mirror national level competitive events. As many as two dozen applicants are narrowed down to the five who represent the site nationally.

The individual shooting events are kept confidential until the shooter arrives at the range. Even then, the targets may be obscured until the shooter completes his movements to arrive at each shooting station.

The courses are new and different each year, requiring speed and accuracy as well as running, jumping, crawling, negotiating obstacles and strict compliance with procedural and safety rules. The objectives are to test and train the security police officers to react properly under stress and to be able to shoot accurately after strenuous physical exertion.

"In any competition, there is always the glory of doing well and also the frustration of making small mistakes. But time and time again, it was a pleasure to hear from fellow competitors about how Hanford was one of the best-trained teams and how we continue to be a class act," Peale said.

"We appreciated representing Hanford," he added. ♦

# Employees' quick action keeps waste transfer on track

Geoff Tyree, CHG

Hanford tank farms engineers John Elsen and Greg Bogen coordinated a quick repair to a pipe leak that saved the tank farm project potentially hundreds of thousands of dollars. Their quick solution also prevented weeks of delay in transferring radioactive and hazardous waste from older single-shell tanks to newer, safer double-shell tanks.

Historically, one in five pipelines connecting Hanford's 149 single-shell tanks have failed when the lines are tested before pumping. Breakdowns in the single-shell tank system are the leading cause of delays in transferring the waste.

"Any delay is significant because we're trying to reduce the risk of a future tank leak," said Bill Ross, CH2M HILL Hanford Group's deputy to the vice president of tank farm operations. "We also need to meet our deadlines under a tight schedule negotiated by the Department of Energy and the state. Finding quick solutions is critical to keeping the project on track."

On May 8, the pump on single-shell Tank A-101 was shut down because of a leak near a junction in the waste transfer line, called a valve pit. Elsen and Bogen reasoned that the problem could be fixed by inserting a new section of pipe and a nozzle that bypassed the leak.

The engineers designed a new piece of equipment and put a rush on its manufacture. Members of the installation crew simulated field conditions and practiced the repair in their maintenance shop. To avoid high radiation levels, repair crews must stand behind railings at the rim of the valve pits, using ropes and 10-foot poles to manipulate tools and equipment below.

The repair was made in the early morning hours of May 24. The line was tested and it held. Pumping resumed a little more than two weeks after a leak had shut down operations at Tank A-101.

In addition to the manufacturing and installation crews, Elsen and Bogen said credit goes to those who made sure the repair met nuclear safety, construction and process requirements.

"Half of the problem was technical and the other half was administrative," said Bogen. "Given the challenges, designing, building and installing a piece of equipment in 12 days was nothing short of a miracle. It happened because everybody worked together."

The valve pit repair cost approximately \$50,000. The savings in money and time is notable because the standard fix for a pipe leak—installing an above ground line—typically costs an estimated \$250,000 and delays pumping operations for several weeks.

"Elsen and Bogen came up with an innovative solution that saved us a lot of time and money," said Ross. "Any savings of time on our project reduces the risk of a future tank leak. This, in turn, reduces the risk to the groundwater below Hanford and to the Columbia River." ♦

# Berlin team wins aerial robotics competition at HAMMER

Karin Nickola, FH

Robert Michelson is the principal research engineer at the Georgia Tech Research Institute Aerospace, Transportation and Advanced Systems Laboratory. And he wanted the Millennial Event competition at the Volpentest HAMMER Training and Education Center to be spectacular!

So Michelson requested a five-acre continuous "target-laden" course.

DynCorp Tri-Cities Services Site Services personnel and the HAMMER operations crew led by Bret Akers complied. Fire, water, vapor, barrels of simulated toxic waste, simulated human dead and survivors were all readied to challenge International Aerial Robotics Competition university students as they attempted autonomous robotic search and rescue flights during the June 29 Millennial Event.

But Michelson got much more than he bargained for. And the Millennial Event sponsored by the Department of Energy Office of Science and Technology will long be remembered not only for its outcome but also for what transpired in the hours immediately preceding the contest.

## Static judging, practice

Static judging day on Tuesday, June 27, went pretty much as planned. Judges Ken Thurman, Charles Shepard and Don Lacey reviewed each team's research papers and examined the entered robots. Michelson and his sons spent the day assembling, testing and placing simulated human survivors, or animatrons, on the course. In his spare moments, Michelson granted interviews to regional media organizations.

One team after another conducted practice flights on Wednesday near HAMMER's HAZMAT pad, Waste Tank prop, Confined Space prop and Comfort Station.

Simon Fraser University was a strong contender, but the team from Burnaby, B.C., crashed its bright yellow robotic "plane" that was valued at \$40,000. The crash all but ended its chance of winning the competition.

Ordinarily, that crash would have been a major topic of discussion. But the subject uppermost on everyone's mind was the rapidly spreading Hanford range fire, on a direct path for HAMMER.

As teams moved to the banks of the Columbia River for their annual recognition event, flames raced towards HAMMER from the west. By 8 p.m. Wednesday, personnel from HAMMER operations, the Hanford



Georgia Tech professor Robert Michelson readies an animatronic 'human survivor' before the aerial robotics competition.



The six-story training tower at the Volpentest HAMMER Training and Education Center is silhouetted by the Hanford range fire on Wednesday evening.

*Continued on page 12.*

## Berlin team wins aerial robotics competition at HAMMER, cont.

Fire Department and DynCorp Tri-Cities Road Maintenance and Heavy Equipment Operations were evacuating and safeguarding the facility. They were shutting down systems, rerouting traffic and digging fire lines.

### HAMMER closed

During the night, powerful flames licked at the west side of HAMMER's main site. The flames then marched north through the outermost acreage of HAMMER's Law Enforcement and Security Training Center, only to turn south and threaten the facility's main site from the east.

When competition judges and contestants awoke Thursday morning, they learned that planes and helicopters bombarding the blaze with water and fire retardant had stopped the fire's forward motion. Although HAMMER's closure Thursday meant canceling the Millennial Event, Michelson felt a glimmer of hope. There was a chance the event could still be held on Friday.

Fortunately, conditions improved dramatically on Thursday. By evening event organizers were calling anxious team members together for an emergency meeting. It appeared the competition would be granted special permission to finish on Friday.



Competitors from Georgia Tech put their aerial robot in motion for the Millennial Event.



### The Millennial Event

Only a limited number of HAMMER staff members and a few media crews were on hand when the Millennial Event finally got under way at 7 a.m. Friday. Bleachers set up for the viewing public were empty. From a spectator's standpoint, the event was at best a disappointment.

The weather remained perfect, however, as the competing teams attempted autonomous flight. And when all was said and done, one team shone above all others. With 3,352.25 points, Technische Universitaet Berlin was the clear winner.

"The Berlin team's robot, MARVIN, or Multi-purpose Aerial Robot Vehicle with Intelligent Navigation, did it all," said professor Michelson. "Using donated Novatel Global Positioning Systems, the robot found black drums of hazardous waste and read the drum labels. MARVIN saw a fire plume with its sensors and backed away. It discovered simulated dead bodies and detected the movement of animatronic human survivors."

Michelson felt the most incredible aspect of MARVIN's autonomous flights was that, at all times, its creators knew exactly what MARVIN was finding.

*Continued on page 13.*



## Berlin team wins aerial robotics competition at HAMMER, cont.

"The robot sent back continuous images that the Berlin team members could view on their laptops," Michelson said. "Each time the robot found a 'survivor,' the robot's computer drew a circle around the image and flashed a happy face. Berlin really did an outstanding job!"

The Technische Universitaet Berlin team was very happy about winning the competition. "We cared deeply about all the objectives professor Michelson's mission had to offer," said team leader Wolfgang Brandenburg.

"The IARC's trophy and purse of \$30,000 donated by the Association of Unmanned Vehicle Systems will make it easier for us to fund our next project," said Brandenburg. "And we are very much taken with advanced controlling systems."

### The future

With the IARC's third mission now complete, Michelson will have to up the ante for competitors.

Mission four might require the robot to be out of the ground team's line of vision. Or it might involve "cooperative autonomous vehicles" working together to complete a mission.

Whatever the future brings, one can be sure that the technology associated with the competition will be cutting edge! And the challenge will border on the impossible. ♦



The winning team, Technische Universitaet Berlin, with prizes.



The winning entry "did it all," according to professor Michelson. Here Technische Universitaet Berlin flies a victory sign.



Team Battelle project director Lori Freeland poses with Humane Society mascot Tank wearing his Team Battelle puppy jacket.

## Team Battelle helps Humane Society

Pooches and their people turned out in record numbers for the recent Paws in the Park fund-raiser held in Pasco to help support the Benton-Franklin Humane Society. Among the participants were more than 50 Battelle staff members, their families and dogs. They raised more than \$3,700 for the Humane Society.

"This year's Paws in the Park nearly tripled last year's net with almost \$12,000 collected for the Humane Society's programs. We simply could not have done it without Team Battelle!" said Brady Layman of Humane Society Public Relations. ♦

# Use propane with caution

Detective Arthur Owen  
Fire Investigator  
Benton County Sheriff's Office

Propane is a convenient fuel for heating, water heating, cooking, clothes drying and grilling on the outdoor barbecue. But for all its convenience, you must take precautions when storing and using propane.

Propane is liquefied petroleum gas. Propane can be either a liquid or a gas. At normal atmospheric pressure and temperature, it is a non-toxic, colorless and odorless gas. Just like natural gas, an identifying odor is added so it can be readily detected.

Under moderate pressure, propane becomes a liquid that vaporizes into a clean-burning gas when released from its storage container. Propane is 270 times more compact as a liquid than a gas, making it economical to store and transport as a liquid.

Propane is heavier than air and it will flow into low areas such as under a deck and into basements. Concentrations as low as 2.2 percent in air will burn.

Any propane cylinder should only be filled to the 80-percent level, so a five-gallon tank is designed to hold four gallons of liquid propane. The remaining space is filled by the conversion of the liquid to gas—one gallon of liquid propane converts to 37 cubic feet of gas. As the gas is used and removed from the tank, more liquid is converted to gas to replace it, keeping the pressure in the tank constant.

You can determine the level of propane in your cylinder by pouring hot water down the side of the tank. Move your hand up and down the side of the cylinder and you will notice a point where there is a difference in temperature. The liquid propane cools the cylinder, and this line of temperature change reflects the amount of liquid propane in the cylinder.

Now that you know about the properties of propane, take the following precautions:

- Never transport a propane cylinder on its side, as this may allow liquid propane to escape creating a dangerous situation. If your cylinder is designed to lay flat such as in a motor home, don't stand it on end. The valves are designed to function above the liquid level where the gas is located on every propane cylinder.
- Do not leave a recently filled cylinder in a hot vehicle. As the temperature elevates, more pressure is produced inside the tank and the pressure valve will release gas inside your vehicle.
- If you are filling a new cylinder for the first time, make sure the cylinder is purged of the air inside the tank. Adding propane to a cylinder that contains air can cause an overpressure situation, and at a minimum may cause your pilot lights to blow out.
- Don't smoke around propane, and keep a fire extinguisher handy.
- An overfilled propane cylinder is not a bargain.
- If you smell propane and think you have a problem, call your local fire department to check the situation. That precautionary call may be the difference between an enjoyable meal and a propane explosion. ♦

## Regular Features



### LETTERS

Employees are invited to write letters of general interest on work-related topics. Anonymous letters will not be printed. We reserve the right to edit letters or not to accept letters for publication. Send your letters to the *Reach*, B3-30, or to \*Hanford Reach on e-mail. Letters are limited to 300 words, and must include your name, company, work group and location. Opinions expressed are those of the author and not of DOE-RL, ORP or their contractors.

### Thanks for caring

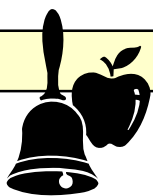
In this everyday work world that we live in, it is very nice to work for a company that did something for its employees that it didn't have to do.

As everyone knows, on June 27 there was a terrible accident on Highway 240 by the Hanford Site [which started a fire. Residents of Benton City were evacuated as the fire threatened homes in Benton City and West Richland. ("Huge fire sweeps through Hanford Site," *Hanford Reach*, July 10.)] After evacuating my home in Benton City, I returned home to a phone call from Bechtel Hanford, Inc.

The folks at Bechtel wanted to know how my family was and if we were okay. They said that they didn't know what they could do but they would connect me with the right people if I had any questions at all. It was a good feeling to have someone who doesn't know me from Adam caring enough to offer help.

In this "Me" generation, it's nice to work for a company that says "Us!"

*Lyle Zeigler*  
*Bechtel Hanford*



### CLASSES

#### Washington State University Tri-Cities Continuing Education Department offers:

- **People Skills: Working Effectively with Others** — July 18. Designed for anyone who wants to communicate more effectively with others. Cost: \$349.
- **The Art of Conflict Resolution** — July 19. Take advantage of the opportunity to practice constructive negotiation skills to resolve work conflicts. Cost: \$349.
- **National Electrical Code** — July 24-26. This inten-

sive course is designed to help you understand important code requirements and to gain the practical knowledge you need on the job. Cost: \$1,025.

- **National Electrical Code: One Day Update** — July 27. Learn about the most important changes to the code. Note: This refresher is for people already proficient in the NEC. Cost: \$349.
- **Grant Writing Workshop** — July 25-26. This two-day workshop walks you through the practical steps to take towards grant writing and how to approach the right funders for the dollars you need. Cost: \$395.

For more information, call 372-7200 or visit the Web site [www.ProEd.wsu.edu](http://www.ProEd.wsu.edu).

#### Protrain offers computer training

- **Introduction to Crystal Reports** — July 19. Create reports and formulas. Cost: \$215.
- **Advanced Crystal Reports** — July 20. Compose enhanced reports and learn the full use of the Crystal Reports program. Cost: \$215.

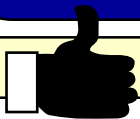
Call 946-1123 for more information on Protrain courses. ♦



## Wild West swing comes to Battelle Auditorium

Cowboy singer and yodeler Wylie Gustafson will bring his Wild West western swing and traditional country group to Battelle Auditorium on Wednesday, July 26, at 7 p.m. Gustafson has appeared on the Grand Ole Opry, Country Music Television and in live performances all over the country. Admission is \$8 in advance and \$10 at the door for adults, and \$7 in advance and \$8 at the door for students and seniors. Advance tickets are available at The Book Place in Richland, ABCDs in Kennewick and at the ETB. The Battelle Staff Association is sponsoring the concert. For more information, visit [www.wylie.com](http://www.wylie.com) and [www.pnl.gov/BSA/auditor.htm](http://www.pnl.gov/BSA/auditor.htm), or contact Andy Plymale at 376-8506 or [plymale@pnl.gov](mailto:plymale@pnl.gov). ♦

## Regular Features



### BRAVO

#### BHI's Sandra Johnson named Consulting Fellow

Sandra Johnson, manager of Property Control for Bechtel Hanford, Inc. was named a Consulting Fellow of the National Property Management Association at the NPMA annual meeting in Reno, Nev. in June.

Consulting Fellow is the highest recognition bestowed on its members by the NPMA. Recipients are required to make significant and continuous contributions to the field of property management by participating on committees and task forces, serving as officers or directors, developing training materials and presentations, making presentations at NPMA events and writing articles about the property management function.

Johnson also was recognized at the same meeting for her service over the past two years as the director of certification for NPMA. The purpose of the certification program is to raise the level of professional competence of industrial, contractor, university and government property management personnel by establishing standards for technical knowledge, methods of evaluation and subsequent recognition.

Johnson has worked at Hanford for 20 years and for BHI for two years. ♦

### Security Ed



Don't forget to send your ideas for Security Ed (the arm-chair know-it-all) to: Security Education, L4-09, or e-mail them to ^Security Education PHMC. If your idea is used, you will receive a credit line in the *Hanford Reach* and will become eligible for prizes in the "Security Pays in Many Ways" campaign. ♦



### VANPOOLS

Vanpool ads are run for two weeks. Ads must be re-submitted to run in subsequent issues of the *Hanford Reach*. The deadline for submissions is Thursday, 10 days prior to publication.

Protection Technology Hanford reminds employees to wear their badges. Vanpool and carpool drivers are responsible for ensuring riders are badged. If a passenger forgets his or her badge, Patrol must be informed at the barricades. For more information, look on the Hanford Web in the Projects and Activities section, Safeguards and Security (PHMC) at <http://www.rl.gov:1050/sas/pg1v3htm>.

#### BENTON CITY

Riders wanted for a vanpool to 200W Area (will go east as far as WSCF). Contact **Charlotte Burruss** at 373-4046. 7/17

#### KENNEWICK

Great company, easy commute. We don't have a job for you, but we do have a van. Come join us. Low rates. Richland Wye to 200W. 8x9 shift. Call **Fred** at 373-2106. 7/17

#### WEST RICHLAND

Vanpool to 200E needs rider. 8x9, 7 a.m. to 4:30 p.m. Picks up at Flat Top Park 'n Ride and The Pit Stop. Stops at 2752/2751, 274-AW, MO-273, MO-294 and 2704-HV. Contact **John Wells** at 373-3733 or **Wendell Briggs** at 372-0951. 7/10 ♦

**SECURITY Pays in Many Ways**

**Get INVOLVED!**

**Know someone who's improving site security?**

Nominate him or her through the "Security Pays In Many Ways" awareness campaign. More info at [Http://www.RI.Gov/sas/pg1v3.Htm](http://www.RI.Gov/sas/pg1v3.Htm), or call 376-1820.



# Regular Features



## NEWSBRIEFS

### Industrial hygienist shares respirator information

Larry Musen, an industrial hygienist in the Office of the Assistant Manager for Science and Technology, Richland Operations Office, provided an update on Department of Energy respirator policy during a recent meeting in Orlando, Fla. His presentation was part of the DOE Industrial Hygiene Coordinating Committee meeting, which was held in conjunction with the American Industrial Hygiene Conference and Exposition.

During his presentation, Musen discussed DOE's decision to adopt a National Institute for Occupational Safety and Health-approved respirator for DOE's security forces. The state-of-the-art respirators will provide protection against chemical, biological and radiological materials that security forces might encounter. He also outlined guidance for implementation of the respirators.

Musen is part of a nine-member national committee that studies respirators and respirator policies for the DOE complex. Representatives of DOE-RL and the Pacific Northwest National Laboratory participated in the AIH Conference and Exposition.

### Docs Online to undergo technology upgrade

The Project Hanford Management System (PHMS) Docs Online Web site is undergoing a technology upgrade. Once it is upgraded, the site will have a new look, will be easier to use and have enhanced search capabilities.

The implementation date for the new and improved Docs Online is July 24. To prepare for the transition, no documents will be posted to Docs Online from the close of business on July 20 through July 23.

Users accessing the site Monday, July 24, should have no problems, but some users may need to reset their bookmarks. If you experience any access problems or broken links, or need other information concerning the updated Docs Online, send an e-mail message to ^PHMS Docs Online, or contact one of the following individuals by e-mail or by phone: Bill Scott at William\_A\_Scott@rl.gov or 373-2252, Lou Boliou at Louis\_C\_Lou\_Boliou@rl.gov or 376-4821, or Jim Barber at James\_R\_Jim\_Barber@rl.gov or 373-4267.

### Special fund established to help Darvi Hull

An account has been opened at HAPO Community Credit Union to receive donations to help Darvi Hull, who is fighting cancer for the second time. Hull is the wife of Todd Hull, Realtime Scientific Data Acquisitions and Analysis Department at the Pacific Northwest National Laboratory.

Hull had been cancer-free for seven years, but was diagnosed with the disease again earlier this year. Employees and friends who would like to donate to the fund may send contributions to the "Darvi Hull Special Fund" at any branch of the HAPO Community Credit Union in the Tri-Cities. Donations will be used to defray the costs associated with Hull's treatment.

For more information, contact Edye Jenkins at 582-9457 or Dennis Heath at dennis.heath@pnl.gov.

### 'White Bluffs' debuts on Richland stage

The Richland Players will present an original stage play titled "White Bluffs" on July 21-23. Local playwright Bonnie Ruth-erford is directing the debut of her play. The setting is the early days of Hanford. Curtain will be at 8 p.m. on Friday and Saturday and at 2 p.m. on Sunday in the Players Theatre on The Parkway. Tickets will be available at the door.

### Money raised for World War II Memorial

About 250 employees attended an auto show and hamburger feed held in the Plutonium Finishing Plant parking lot on June 21. The event raised \$1,000, which will be donated to the World War II Memorial on behalf of the Nuclear Material Stabilization Project. Fluor Hanford employees Don Sorenson and Diana Grando organized the fund-raiser. ♦

# Regular Features



**H**.anford **E**.mployee **R**.ecreation **O**.rganization

## **HERO POLICY FOR NON-SUFFICIENT FUNDS**

**CHECKS** — Because of recent incidences with NSF checks received by HERO, our future policy will be to pass associated NSF bank fees on to check issuers. HERO will no longer absorb those costs.

## **HANFORD BOARD OF DIRECTORS AND AREA REPS/HERO ACTIVITIES/TICKET SELLERS INFORMATION**

— Until the new HERO Web page is in effect, HERO information can be accessed on the Hanford Intranet Web site by clicking on "Project Hanford Management Contract," "General Information," "Hanford Information," and then clicking "HERO - Hanford Employee Recreation Organization." To make it easier to access this information, we suggest that you save it to "Favorites" or "Bookmarks" (located on the toolbar).

## **HANFORD RECREATION ASSOCIATION (HRA) DISCOUNTS**

— Check out the HRA listing often! New vendors are continually added. Located on the Hanford Intranet Web site. To reach the site, click on "Project Hanford Management Contract," "General Information," "Hanford Information," and then "Hanford Recreation Discounts." Our new Web page is in the making...stand by for further instructions!

**NEW 400/600 AREA HERO REPRESENTATIVE** — Congratulations Jackie Roderick, and welcome to HERO! Jackie can be reached at 373-7316.

**DISCOUNTED POSSE TICKETS** — \$3 per person for general seating season home games, with the exception of play-off games. For an additional cost, the Posse ticket office will upgrade your general seating tickets to box seating. Make checks payable to "Posse." Contact Nancy Zeuge (X3-74), Marvene McChesney (T4-61) or Margaret Vasquez (G1-27).

**THE RICHLAND PLAYERS DISCOUNT TICKETS** - Discounts of \$1 for individual shows and \$4 for season tickets offered to all Hanford Recreation Association (HRA) cardholders. HRA cards must be presented at the box-office to receive discounts.

**DISCOUNTED MOVIE TICKETS** — Limit of six per purchase. For Carmike Theaters - \$4.50 each. Restrictions will apply only to Sony DDS movies. A disclaimer for restricted movies will be noted in the *Tri-City Herald* Carmike announcements. For Regal Theaters - \$4 each.

For Yakima Mercy Theaters - \$5 each (no restrictions). Send checks made payable to "HERO" to Michelle Brown-Palmore (A7-51), Linda Sheehan (T4-40), Nancy Zeuge (X3-74) or Patti Boothe (T6-04). Send checks to Flu Garza (T4-01) and Nancy Zeuge (X3-74) for Yakima Mercy Theaters only.

**SILVERWOOD THEME PARK** - Silverwood is into summertime full swing! Check out HERO's Intranet Web site for a complete schedule of days and times. Adult tickets are \$17.84 (normally \$25.19), youth (ages 3-7) and senior (65+) tickets are \$9.44 (normally \$16.79). Send checks made payable to "HERO" to Jan Dickinson (H2-23) or Laurie Franklin (R2-12). Personal checks for purchases in excess of \$250 will not be accepted. Send a cashier's check or money order for payments in excess of \$250. No cash, please!

**PENDLETON ROUND-UP TIME** — Sept 16. Saddle up and head on down to the Pendleton Round-Up! Tickets are \$13 each with a limit of four per person on a first-come, first-served basis. Don't delay. Tickets will sell fast! Send checks made payable to "HERO" to Deyonne Southwick T5-05.

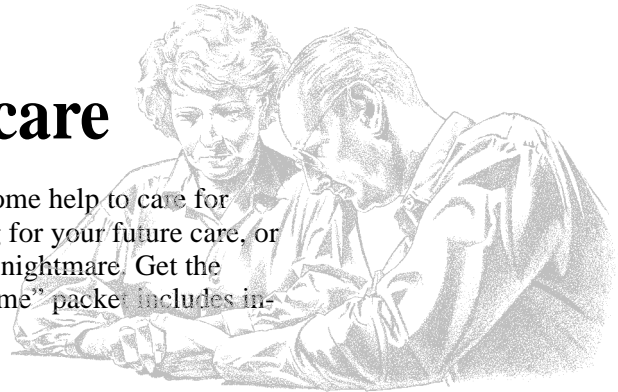
**CABO SAN LUCAS** — Oct. 18-25. \$819 ppdo and \$753 ppto. Price includes round-trip air from Seattle, seven nights lodging at Posada Real in San Jose del Cabo, hotel taxes, round-trip transfers and a guest welcoming party. The hotel is located on the beach in San Jose del Cabo. All rooms are air-conditioned and have an ocean view. \$100 deposit is due by July 21. Send e-mail to Denise Prior.

More information will appear in the *Reach* and on the Hanford Intranet Web site as details develop and additional trips are offered. ♦



### Plan now for future care

It's inevitable. We all get older, and we may need some help to care for ourselves at a point in the future. Don't let planning for your future care, or that of a loved one, become a confusing, emotional nightmare. Get the facts. Working Solutions' "A Home Away From Home" packet includes information on the following topics:



- Living arrangements in later life
- Long-term care policies
- Assisted living and continuing-care housing options
- Nursing facilities: What they are, what they cost .

Click [www.working-solutions.com](http://www.working-solutions.com), enter your Group Plan PIN number 5161 and check out WSI's free packet of articles, "A Home Away From Home."

No Web access? You can also get your free articles by:

- Calling WSI at 800-358-8515.  
(This number can also be used to talk to a WSI counselor.)
- E-mailing the information requested below to [articles@wsi-or.com](mailto:articles@wsi-or.com)
- Faxing the form below to (206) 362-8081.

YES! Please send me the FREE packet  
"A Home Away from Home"

Name \_\_\_\_\_

E-mail \_\_\_\_\_

Home Address \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

Home Phone \_\_\_\_\_

Work Phone \_\_\_\_\_

Employer \_\_\_\_\_

Worksite \_\_\_\_\_

Working Solutions, Inc. provides free and confidential services for employees and their family members.

WSI provides counseling, resources, referrals and educational materials to help employees and family members meet the demands of life and work.